

DRAFT

Title:

Nebraska Telehealth Network

Description:

On December 17, 2002 the Public Service Commission issued an order authorizing the support of telehealth from the Nebraska Universal Service Fund. The order directed the Nebraska Hospital Association to submit a plan which would define how the Nebraska Universal Service Fund support should be used to support rural health care providers. A preliminary plan was submitted to the Public Service Commission in late May, 2003. The Nebraska Hospital Association has continued to work with the hub hospitals to develop a more detailed plan which will also incorporate bioterrorism alerts. Efforts are also being made to incorporate bioterrorism preparedness into the plan for the Nebraska Telehealth Network.

Components:

- Phase one of the network will include all Nebraska hospitals which currently have videoconferencing equipment or are planning to order equipment. A router will be installed in College Park in Grand Island to provide a connection among all of the hub hospitals.
- Phase two will address issues such as maintenance, scheduling, operations, and governance. Additional hospitals will also be added to the network.

Enterprise Benefits:

A telehealth network which connects all hospitals, providing access to consultations with medical specialists, continuing medical education, and bioterrorism training and alerts is critical to the provision of health care in rural areas of the state. There is a lack of specialist services in rural areas, particularly mental health services. Telemedicine has proven to be an effective way to provide consultations with specialists. Currently mental health consultations and teleradiology are the two most common types of specialist services provided via telemedicine. Rural health care providers also have fewer opportunities for continuing medical education in their community and must often drive several hours to attend training. Continuing medical education is currently being provided via telehealth in Nebraska and has proven to be an effective and efficient method of delivery. It is also critical that all hospitals are connected to a telehealth network in order to prepare health care providers to respond quickly to bioterrorism threats and other public health risks.

DRAFT

Title:

Statewide Wireless Public Safety Communications System

Description:

The Legislature passed LB 1211 in 2002 to establish a statewide seamless wireless communications system. The Statewide Communications Alliance of Nebraska (SCAN) was created pursuant to the Interlocal Cooperation Act to operate, maintain, and manage the system. A separate interlocal agency has been created to acquire real and personal property and construct facilities for use with the system.

Components:

The SCAN Board has developed a strategic plan to guide its efforts. A copy of the plan and other information is available at: www.scan-nebraska.org. Components of the plan include:

1. Funding;
2. Administrative and legal action;
3. Integrating disparate systems;
4. Generating support;
5. Plans for incorporating data, 700 MHz and 4.9GHz technologies.

Enterprise Benefits:

1. Public safety.
2. Safety of emergency responders.

DRAFT

Title:

Community IT Planning and Development

Description:

Information technology is transforming the economy and society, creating a completely new paradigm. In response to these changing conditions, communities are finding that economic and community development processes need to be retooled. In order to compete in the global economy, communities need access to advanced telecommunications services and a tech-savvy workforce. Businesses need to understand how to utilize technology to expand their markets, increase efficiency, and reduce costs. Information technology can also enhance quality of life by improving access to health care, educational opportunities, and community information.

Components:

- **Community Leadership and Support.** Through the IT Planning and Mini Grant program, communities in Nebraska are forming local technology committees and developing technology plans. Each year, up to eight communities are able to participate in the program.
- **Telecommunications Infrastructure.** Communities need access to broadband Internet service, wireless telephone service, and advanced telephone services such as voice mail. In the next few years, Voice Over IP may be another services that businesses require in order to relocate or expand in a community.
- **Technology Literacy and Access.** Community residents need access to basic computer and Internet training as well as access to the Internet at public libraries or community technology learning centers.
- **Advanced Technology Training.** Businesses need access to advanced technology training for their employees.
- **Economic Development and E-commerce.** Economic developers need to understand the needs of technology-intensive businesses. In order to remain competitive, small businesses need to begin utilizing information technology to expand their markets, reduce costs, and increase efficiency.
- **Community Services and Information.** Local governments and other community organizations can use telecommunications to provide services and to improve communication with customers. In many communities, telecommunications can improve access to health care.

Enterprise Benefits:

For many years, Nebraska has experienced a two-tier economy: prospering metropolitan areas and economically challenged rural areas. If rural communities do not utilize technology effectively to enhance development opportunities, the gap between metropolitan and rural areas will continue to grow.

DRAFT

Title:

Network Nebraska

Description:

The primary objective of this initiative is to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the State of Nebraska. The Division of Communications and the University of Nebraska engaged in a collaborative partnership that used existing resources to aggregate disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney, North Platte to the Panhandle. The next phase of this initiative is to formalize business relationships and agreements and to enhance rural bandwidth through local aggregation.

Components:

The major components of this initiative include:

1. Development of a scalable, reliable, and secure telecommunications infrastructure that enables any type of eligible entity (i.e. local and state government, public and private K-12 and higher education, health care institutions) to purchase the amount of service that the entities need, when they need it, on an annual basis;
2. Establishment of a catalog of value-added applications that enables eligible entities to pick and choose services that are pertinent to them (e.g. Internet1, Internet2, and videoconferencing);
3. Implementation of a network operations center that offers a helpdesk, network diagnostics, and engineering assistance in order to ensure acceptable qualities of service;
4. Establishment of a billing or accounting center to accept service orders, extend service agreements, provide consolidated billing, and to maintain customer accounts.

Enterprise Benefits:

Through aggregation of demand, adoption of common standards, and collaboration with network services and applications, participants can achieve many benefits, including:

- Lower network costs;
- Greater efficiency for participating entities;
- Interoperability of systems providing video courses and conferencing;
- Increased collaboration among all K-20 educational entities;
- New educational opportunities;
- Competitiveness with surrounding states; and
- Better use of public investments.

DRAFT

Title:

Statewide Synchronous Video Network

Description:

The primary objective of this initiative is to establish an Internet Protocol-based network that will interconnect all existing and future distance learning and videoconferencing facilities in the State of Nebraska. Nebraska currently has approximately 300 high school distance learning classrooms, 30 higher education distance learning classrooms, over 50 State agency videoconferencing rooms, and (soon-to-be) over 60 videoconferencing facilities for Telehealth in local and regional hospitals. More growth and proliferation of distance learning and videoconferencing equipment and sites is expected in the near future. These 400+ interactive video facilities currently utilize a variety of video standards and bandwidth speeds that prevent interconnection between sub-networks. The Statewide Synchronous Video Network, as envisioned, would use compatible audio and video standards to enable any classroom or facility to connect with any other classroom or facility or to connect with multiple sites simultaneously.

Components:

The major components of this initiative include:

1. Identification of a single audio and video standard for low-bandwidth distance learning and videoconferencing;
2. Acquisition of upgrade or replacement equipment and/or software that ensures compliance with the audio and video standard;
3. Development or purchase of a scheduling system or enterprise resource management program that allows potential users to A) know the location and availability of resources, and B) set up or reserve ad hoc or regularly scheduled events with other entities;
4. Development of a network bandwidth management system or network operations center that assures pre-determined qualities of service, depending upon the type of video traffic;
5. Development of an event clearinghouse that allows registration for interactive video events;
6. Training modules for new users;
7. Promotion and marketing of educational events to maximize the value of the system;
8. Development of a funding algorithm to allow shared use of the statewide backbone.

Enterprise Benefits:

Interactive videoconferencing and distance learning developed rapidly across Nebraska in the 1990's. Prior to recognized video standards or a coordinating body, entities were free to adopt any equipment, standard, or system that met their needs. Little thought was paid to interconnectivity or compatibility. Consequently, Nebraska became a state of disparate, redundant systems that prevented multi-jurisdictional collaboration or maximization of educational opportunities outside of a particular geographic boundary or system.

The enterprise benefits of an interconnected video system include:

- Greater sharing of educational courses, events, and training across sub-network boundaries, irrespective of geography;
- More efficient use of available resources—more classrooms and sites are available within less distance of the user;
- One-to-many videoconferencing capabilities for news alerts, bioterrorism alerts, or other emergency uses;
- Collaborative development across various service agencies (i.e. medical services to schools, adult and continuing education opportunities).

DRAFT

Title:

Nebraska eLearning Initiative

Description:

The primary objective of this initiative is to promote the effective and efficient integration of technology into the instructional process and to utilize technology to deliver educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis.

This initiative also involves the establishment of a Nebraska eLearning Consortium to organize and oversee the effort required to establish and execute a statewide eLearning strategy to:

- connect eLearning innovators and leverage their expertise
- build collaborative relationships between K-12, Higher Ed, and other continuing education providers
- develop discipline-specific and age-specific instructional design models
- ensure that the infrastructure required to support the deployment and ongoing support of eLearning is in place and available

The eLearning Consortium would also be responsible for providing administrative support to include the negotiation of required hardware and software purchasing and licensing agreements, developing and implementing deployment strategies, facilitating the establishment of statewide eLearning organizations, and possibly providing hosting and technical support services as necessary.

Components:

The primary components of this initiative are:

1. Course Management software – this technology supports the development and delivery of instructional content, assessment and grading, lesson planning, and provides learners with instructional support features to include interactive chat and threaded discussion groups, linkage to reference materials, etc.
2. Content Management software -- this technology would serve as the basis for the establishment of a Nebraska eLearning Knowledge Repository to facilitate the sharing of educational content. This Knowledge Repository would provide the ability to store, organize, classify and categorize, control access to, retrieve, and present digital content of all forms to include audio, video, graphics and text.
3. Infrastructure -- components to include the network, organizational, administrative, and support resources required to deploy and support eLearning statewide.

The primary access and delivery medium for eLearning will be the **Internet**. Therefore, the availability of a robust statewide network providing sufficient bandwidth to support the deployment of eLearning across the state of Nebraska will be required. Certain advantages would be realized by operating the system over an educational **Intranet**.

To properly deploy an effective eLearning strategy on a statewide basis, the infrastructure requirements, establishment of instructional design models and guidelines, and instructor training should not be underestimated.

Enterprise Benefits:

Establishing a statewide eLearning strategy is critical. The costs associated with the deployment of an efficient and effective eLearning environment are expected to be substantial. However, the costs of not acting and not implementing are even higher in terms of maintaining a highly literate and employable work force. Proper implementation will provide educators with instructional resources not currently available to them or their students. Implementation of a standards-based eLearning strategy will provide equitable access to students and teachers all over Nebraska at a time when learning resources are being enriched in affluent, urban areas and depleted in economically-challenged, rural areas.

Through such a system, teachers would be able to share learning objects and other educational content and reference materials that would significantly enrich and deepen the learning experiences offered to Nebraska students, particularly those in the K-12 sector. The effective deployment of a statewide eLearning system will also facilitate greater collaboration between educators, the building of extended educational communities of learning, and support ongoing professional development and lifelong learning opportunities.

The infrastructure, technology, best practices, and storage repository that primarily serves K-12 and Higher Education can also become a dual-use training engine for all other agencies, political subdivisions, and adult continuing education. Instructional and training modules ranging from the simple (how to operate a piece of machinery) to the complex (a web-based course to achieve technician certification) are possible using a web-based, eLearning system.

DRAFT

Title:

Enterprise Architecture (For State Government Agencies)

Description:

Enterprise Architecture Framework can be described as a methodology for developing an organization's IT support functions. Ideally, when governments establish their infrastructures using common enterprise architecture, making systems work together will be simpler because each would have addressed the items that are crucial to interoperability of systems developed for specific business needs.

Enterprise Architecture supports the business of government, enables information sharing across traditional barriers, enhances government's ability to deliver effective and timely services, and supports agencies in their efforts to improve government functions and thereby services.

The State Government Council will serve as a "committee-of-the-whole" to develop the enterprise architecture. The enterprise architecture will focus on those areas that provide opportunities for cost sharing, data sharing and enhancements that affect multiple agencies rather than a single entity. It is not feasible for the enterprise architecture to address every technical detail for every agency. All agencies should have an opportunity to review and comment on the enterprise architecture as it evolves.

The State Government Council looked at several enterprise architecture methodologies. There was consensus to investigate the methodology developed by the National Association of State CIOs (NASCIO), because it was designed for state government and reflects the need for a high level perspective, rather than one that is too detailed.

Components:

Developing the Enterprise Architecture will include the following activities:

1. Readiness Assessment
 - a. NASCIO *EA Maturity Model v1.3* (The *EA Maturity Model* is a series of benchmarks for evaluating a state's current capabilities in 8 areas.)
 - b. NASCIO *EA Assessment Preview* (The *EA Assessment Preview* provides an introduction to the EA Readiness Assessment, as well as a listing of each question that will be included in the on-line assessment.)
 - c. NASCIO On-Site Visit (A three- or four-person team will make an on-site visit to explain the assessment process and the NASCIO EA methodology. The team will include NASCIO staff and representatives of two states that have been using the NASCIO methodology.)
 - d. EA Assessment Summary Report (The NASCIO team will review and analyze the results of the EA Assessment Preview and onsite visit. The NASCIO team will also

prepare an EA Readiness Assessment Summary Report for Nebraska. The summary report will identify potential next steps for further development of the EA Program.)

2. NASCIO *Enterprise Architecture Development Tool-Kit v2.0*

The Tool-Kit provides a comprehensive set of materials for developing the Enterprise Architecture. It includes a framework consisting of governance, business architecture, technology architecture, and standards and guidelines. These four areas provide the foundation for the Enterprise Architecture by identifying business needs, technological direction, and processes. A copy of the tool-kit is available at the NASCIO website:

www.nascio.org.

Enterprise Benefits:

A Successful enterprise architecture will provide the following benefits:

- Lower costs;
- Easier interoperability among systems;
- Greater data sharing;
- Improved services.

DRAFT

Title:

E-Government

Description:

The State Government Council has adopted and annually updates the *E-Government Strategic Plan for Nebraska State Government*. The principles guiding the plan are:

- E-government should be considered a continuous process of using technology to serve citizens and improve agency operations;
- Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services;
- Agencies have responsibility for performing statutory functions, which means that agency directors must retain ownership of data, responsibility over the use of information technology, and prioritization of projects within the agency to achieve the greatest benefit;
- Cooperation is critical to achieving the goals of e-government, in order to integrate information and services and allow the easy exchange of information;
- An enterprise approach is essential to e-government, including the topics of accessibility for disabled persons, architecture, directories, funding, portal, privacy, security, and other issues; and
- E-government is defined as the use of technology to enhance information sharing, service delivery, constituency and client participation, and governance by transforming internal and external relationships.

The plan includes 26 specific actions and recommendations for implementing e-government. The current version of the plan is available on the NITC's Web site at <http://www.nitc.state.ne.us/>.

Components:

The three goals for e-government are:

Goal 1: Government-to-Citizen and Government-to-Business

Anyone needing to do business with state government will be able to go to the state's Web site, easily find the information or service they need, and if they desire, complete all appropriate transactions electronically.

The plan contains 17 action items in the following areas: Citizen Portal Enhancement; Business Portal Enhancements; Education Portal; and Forms Automation.

Goal 2: Government-to-Government

State agencies will improve services and increase the efficiency and effectiveness of government operations through collaboration, communication, and data sharing between government agencies at all levels.

Goal 3: Government-to-Employee and Internal Operations

Agencies will examine internal operations to determine cost-effective e-government applications and solutions. The purpose of these efforts is to improve efficiency and effectiveness by replacing manual operations with automated techniques.

Enterprise Benefits:

The *E-Government Strategic Plan* includes a discussion of the benefits of e-government and a detailed list of actions and recommendations. The primary benefits are:

1. Improved services for citizens and businesses.
2. Increased efficiency and effectiveness for agencies.

DRAFT

Title:

Security and Business Resumption (For Information Technology Systems)

Description:

This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the state's information technology resources. Information security will serve statutory goals pertaining to government operations and public records. These include:

1. Insure continuity of government operations (Article III, Section 29 of the Nebraska Constitution; Nebraska Revised Statutes Sections 28-901 and 84-1201)
2. Protect safety and integrity of public records (Nebraska Revised Sections 28-911, 29-2391, and 84-1201)
3. Prevent unauthorized access to public records (Nebraska Revised Statutes Sections 29-319, 81-1117.02, and 84-712.02)
4. Insure proper use of communications facilities (Nebraska Revised Statutes Section 81-1117.02)
5. Protect privacy of citizens (Nebraska Revised Statutes Section 84, Article 7)

Components:

Major activities include:

1. Developing an overall security strategy, including policies, security awareness, and security infrastructure improvements;
2. Network Security standards and guidelines;
3. Education and training;
4. Authentication (directory services project);
5. Disaster recovery for information technology systems (as part of a broader business continuity planning);
6. Compliance with federal privacy and security mandates;
7. Security Assessments.

Enterprise Benefits:

Benefits will include:

1. Lower costs by addressing security from an enterprise perspective;
2. Cost avoidance;
3. Protecting the public trust.